

What is claimed is:

1. A non-aqueous electrolyte secondary cell comprising:
 - a positive electrode for reversibly intercalating-deintercalating lithium ions;
 - 5 a negative electrode for reversibly intercalating-deintercalating lithium ions; and
 - a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt, wherein,
the non-aqueous solvent includes a cycloalkylbenzene derivative and
10 an alkylbenzene derivative having a quaternary carbon directly bonded to a benzene ring and not having a cycloalkyl group directly bonded to the benzene ring.
2. The non-aqueous electrolyte secondary cell according to claim 1, wherein the non-aqueous solvent further includes an unsaturated cyclic
15 carbonate derivative.
3. The non-aqueous electrolyte secondary cell according to claim 1, wherein:
 - the cycloalkylbenzene derivative is contained in the non-aqueous solvent at a ratio of 0.5 to 5 parts by mass per 100 parts by mass
20 of the non-aqueous solvent; and
 - the alkylbenzene derivative having a quaternary carbon directly bonded to a benzene ring and not having a cycloalkyl group directly bonded to the benzene ring is contained in the

non-aqueous solvent at a ratio of 0.5 to 10 parts by mass per 100 parts by mass of the non-aqueous solvent.

4. The non-aqueous electrolyte secondary cell according to claim 2, wherein:

5 the cycloalkylbenzene derivative is contained in the non-aqueous solvent at a ratio of 0.5 to 5 parts by mass per 100 parts by mass of the non-aqueous solvent; and

10 the alkylbenzene derivative having a quaternary carbon directly bonded to a benzene ring and not having a cycloalkyl group directly bonded to the benzene ring is contained in the non-aqueous solvent at a ratio of 0.5 to 10 parts by mass per 100 parts by mass of the non-aqueous solvent.